

## SEQUENCE LISTING

<110> McIntosh, J. Michael  
Olivera, Baldomero M.  
Cruz, Lourdes J.  
Corpuz, Gloria P.  
Jones, Robert M.  
Garrett, James E.

<120> Conotoxin Peptides

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<150> US 60/173,298  
<151> 1999-12-28

<150> US 60/118,381  
<151> 1999-01-29

<150> US 09/493,143  
<151> 2000-01-28

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<170> PatentIn Ver. 2.0

<210> 1  
<211> 14  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:generic  
conotoxin peptide sequence

<220>  
<221> PEPTIDE  
<222> (1)..(2)  
<223> Xaa at residue 1 is des-Xaa, Asn, Gln or pyro-Glu;  
Xaa at residue 2 is des-Xaa, Gly, Ala, Glu, gamma-  
carboxy-Glu, Asp, Asn, Ser, Thr, g-Asn (where g is  
glycosylation), g-Ser or g-Thr;

<220>  
<221> PEPTIDE  
<222> (3)..(7)  
<223> Xaa at residue 3 is Val, Ala, Gly, Leu, Ile, Ser,  
Thr, g-Asn, g-Ser or g-Thr; Xaa at residue is Phe,  
Tyr, meta-Tyr, ortho-Tyr, nor-Tyr, mono-halo-Tyr,  
di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr,

<220>  
<221> PEPTIDE  
<222> (7)  
<223> nitro-Tyr, Trp (D or L), neo-Trp, halo-Trp (D or  
L), any synthetic aromatic amino acid, an  
aliphatic amino acid bearing linear or branched  
saturated hydrocarbon chains such as Leu (D or L),  
Ile and

<220>

$\langle 210 \rangle$  2

<211> 13  
 <212> PRT  
 <213> Conus marmoreus

<220>  
 <221> PEPTIDE  
 <222> (7)..(8)  
 <223> Xaa at residue 7 is Tyr, mono-halo-Tyr,  
 di-halo-Tyr, O-sulpho-Tyr, O-Phospho-Tyr or  
 nitro-Tyr; Xaa at residue 8 is Lys, N-methyl-Lys,  
 N,N-dimethyl-Lys or N,N,N-trimethyl Lys

<220>  
 <221> PEPTIDE  
 <222> (12)  
 <223> Xaa at residue 12 is Pro or hydroxy-Pro.

<400> 2  
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<210> 3  
 <211> 12  
 <212> PRT  
 <213> Conus marmoreus

<220>  
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 <223> Xaa at residue 6 is Tyr, mono-halo-Tyr,  
 di-halo-Tyr, O-sulpho-Tyr, O-Phospho-Tyr or  
 nitro-Tyr; Xaa at residue 7 is Lys, N-methyl-Lys,  
 N,N-dimethyl-Lys or N,N,N-trimethyl Lys

<220>  
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 <222> (11)  
 <223> Xaa at residue 11 is Pro or hydroxy-Pro

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<210> 4  
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 <212> PRT  
 <213> Unknown

<220>  
 <223> Description of Unknown Organism:unknown Conus  
 species

<220>  
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 <222> (6)..(7)  
 <223> Xaa at residue 6 is Tyr, mono-halo-Tyr,  
 di-halo-Tyr, O-sulpho-Tyr, O-Phospho-Tyr or  
 nitro-Tyr; Xaa at residue 8 is Lys, N-methyl-Lys,  
 N,N-dimethyl-Lys or N,N,N-trimethyl Lys.

<220>  
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Ser Thr Cys Cys Gly Phe Xaa Met Cys Ile Xaa Cys Arg  
1 5 10

[illegible]

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Met	Arg	Cys	Leu	Pro	Val	Leu	Ile	Ile	Leu	Leu	Leu	Leu	Thr	Ala	Ser	
1				5					10					15		
gca	cct	ggc	gtt	gat	gtc	cta	ccg	aag	acc	gaa	gat	gat	gtg	ccc	ctg	96
Ala	Pro	Gly	Val	Asp	Val	Leu	Pro	Lys	Thr	Glu	Asp	Asp	Val	Pro	Leu	
			20					25					30			

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<211> 61
<212> PRT
<213> Conus bandanus
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gga cct agc gtt gat gcc caa ctg aag acc aaa gat gat gtg ccc ctg 96  
Gly Pro Ser Val Asp Ala Gln Leu Lys Thr Lys Asp Asp Val Pro Leu  
20 25 30

tca tct ttc cga gat cat gca aag agt acc cta cga aga ctt cag gac 144  
Ser Ser Phe Arg Asp His Ala Lys Ser Thr Leu Arg Arg Leu Gln Asp  
35 40 45

aaa cag act tgc tgt ggc tat agg atg tgt gtt cct tgt ggt 186  
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<211> 62
<212> PRT
<213> Conus textile
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 Ser Ser Phe Arg Asp His Ala Lys Ser Thr Leu Arg Arg Leu Gln Asp  
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<210> 17  
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 <212> DNA  
 <213> Conus pennaceus

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           1                  5                  10                  15  
 gca cct agc gtt gat gcc aaa gtt cat ctg aag acc aaa ggt gat ggg 96  
 Ala Pro Ser Val Asp Ala Lys Val His Leu Lys Thr Lys Gly Asp Gly  
                   20                  25                  30  
 ccc ctg tca tct ttc cga gat aat gca aag agt acc cta caa aga ctt 144  
 Pro Leu Ser Ser Phe Arg Asp Asn Ala Lys Ser Thr Leu Gln Arg Leu  
                   35                  40                  45  
 cag gac aaa agc act tgc tgt ggc ttt aag atg tgt att cct tgt 189  
 Gln Asp Lys Ser Thr Cys Cys Gly Phe Lys Met Cys Ile Pro Cys  
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<210> 18  
 <211> 63  
 <212> PRT  
 <213> Conus pennaceus

<400> 18  
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 Ala Pro Ser Val Asp Ala Lys Val His Leu Lys Thr Lys Gly Asp Gly  
                   20                  25                  30  
 Pro Leu Ser Ser Phe Arg Asp Asn Ala Lys Ser Thr Leu Gln Arg Leu  
           35                  40                  45  
 Gln Asp Lys Ser Thr Cys Cys Gly Phe Lys Met Cys Ile Pro Cys  
           50                  55                  60

<210> 19  
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<212> DNA  
<213> Conus marmoreus

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24

<210> 20  
<211> 22  
<212> DNA  
<213> Conus marmoreus

<400> 20  
ctggatcctt catgctgggtt aa

22

005950-10203560